

BOOKS

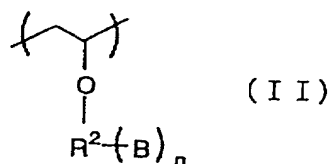
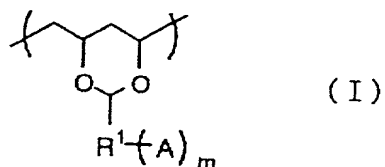
plate comprising:

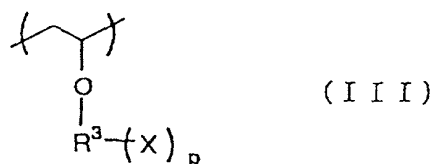
a support; and

a photosensitive layer containing:

a modified poly(vinyl alcohol) resin binder having a radical-polymerizable group and an acid group; and at least one of a photo-polymerization initiator and a heat-polymerization initiator.

2. The negative photosensitive lithographic printing plate as claimed in claim 1, wherein the modified poly(vinyl alcohol) resin binder contains: at least one of repeating units represented by formulae (I) and (II); and at least one of repeating units represented by formula (III):





wherein A and B each independently represents a radical-polymerizable group; X represents an acid group; R^1 , R^2 and R^3 each independently represents a substituted or unsubstituted hydrocarbon group having 1 to 30 carbon atoms, and R^1 , R^2 and R^3 each has a valent of $(m+1)$, $(n+1)$ and $(p+1)$ respectively; and m, n, and p each independently represents an integer of 1 to 5.

3. The negative photosensitive lithographic printing plate as claimed in claim 1, wherein the radical-polymerizable group has an addition-polymerizable unsaturated bond.

4. The negative photosensitive lithographic printing plate as claimed in claim 1, wherein the radical-polymerizable group has at least one selected from the group consisting of a (meth)acryloyl group, (meth)acrylamide group, allyl group and styrene structure.

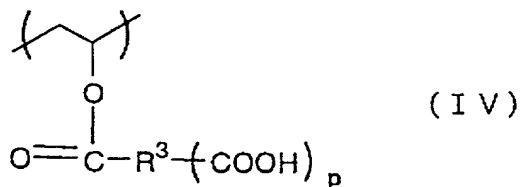
5. The negative photosensitive lithographic printing plate as claimed in claim 1, wherein the acid group has an

acid dissociation constant: pK_a of 7 or lower.

6. The negative photosensitive lithographic printing plate as claimed in claim 1, wherein the acid group is selected from the group consisting of $-\text{COOH}$, $-\text{SO}_3\text{H}$, $-\text{OSO}_3\text{H}$, $-\text{PO}_3\text{H}_2$, $-\text{OPO}_3\text{H}_2$, $-\text{CONHSO}_2-$ and $-\text{SO}_2\text{NHSO}_2-$.

7. The negative photosensitive lithographic printing plate as claimed in claim 1, wherein the acid group is $-\text{COOH}$.

8. The negative photosensitive lithographic printing plate as claimed in claim 2, wherein the repeating unit represented by formula (III) is represented by formula (IV):



wherein R^3 represents a substituted or unsubstituted hydrocarbon group having 1 to 30 carbon atoms, and R^3 has a valent of $(p+1)$; and p represents an integer of 1 to 5.

9. The negative photosensitive lithographic printing plate as claimed in claim 8, wherein R^3 in the formula (IV) contains at least one of an aliphatic ring structure and an

aromatic ring structure.

10. The negative photosensitive lithographic printing plate as claimed in claim 8, wherein R^3 in the formula (IV) contains an aliphatic ring structure.

11. The negative photosensitive lithographic printing plate as claimed in claim 2, wherein the modified poly(vinyl alcohol) resin binder contains:

i) at least one of the repeating units represented by formulae (I) and (II) in an amount of from 1 to 99% by mole; and

ii) at least one of repeating units represented by formula (III) in an amount of from 1 to 70% by mole,

in which the sum of the repeating unit i) and the repeating unit ii) is 2 to 100% by mole.

12. The negative photosensitive lithographic printing plate as claimed in claim 1, wherein the photosensitive layer further contains a compound having at least one ethylenically unsaturated bond capable of undergoing an addition polymerization.